Legitimation through executive order?

The issue of space resources in international law

Maximilian Gartner, Michael Friedl 2020-04-21T09:00:27

Resource extraction from and mining of celestial bodies such as the Moon or asteroids has matured from a fantastical idea of science fiction to a contentious issue of international law. It is characterized by a tension of international treaties, such as the Outer Space Treaty (OST) of 1967 and unilateral national initiatives. The US arguably broke the mold of theoretical discourse with its Commercial Space Launch Competitiveness Act of 2015 (SPACE-Act), aiming to facilitate exploitation of outer space resources by nationals. As the first European country to do so, Luxembourg followed in 2017 with its Loi […] sur l'exploration et l'utilisation des ressources de l'espace, extending legal cover to all companies with a registered office in the country.

US executive order solidifies stance on space resource exploitation

Exploitation of space resources was given wider attention when, on 6 April 2020, US President Trump, building on the SPACE-Act, issued the Executive order on Encouraging International Support for the Recovery and Use of Space Resources. The document seeks to further push US policy towards space resource utilization, increasingly through non-governmental means, and to clarify the US position on (applicable) international law. This initiative is deemed to be legitimized by an apparent uncertainty with respect to space resources, which is considered as an unacceptable impediment to commercial activities. This uncertainty is underlined with an explicit rejection of principles enshrined in the more recent Agreement Governing the Activities of States on the Moon and Other Celestial Bodies of 1979 (MA), of which the USA is not a party to, which would set out more stringent rules regarding space resource exploitation. Instead a new set of rules is meant to be established, with the order instructing the Secretary of State to "seek to negotiate joint statements and bilateral and multilateral arrangements with foreign states", essentially aiming to create more favourable and concise case-by-case frameworks. To fully understand the implications of the order, it is helpful to contrast it with the existing body of international space law.

The current status of the law concerning space resource utilization

It is clear, also from the Executive Order itself, that there are two treaties, which include provisions, applicable to space resource utilization. The first and most prominent is the 1967 OST, conceived at the peak of the space race, which has bundled rules on a wide range of issues, addressing responsibility and liability for space activities, a potential arms race and contamination of celestial bodies to name just a few. Art II OST reads as follows:

> “Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.”

There are considerably divergent views in literature and state practice as to whether this provision applies to space resource utilization at all, and if so, whether it permits or prohibits space resource utilization. Arguments have been made that the phrase by any other means effectively includes space resources. Others have then pointed out, that the article only prohibits national appropriation and thus private parties are not barred from “buying plots on the Moon”. In any case, it is safe to say that there is no widespread agreement even on the applicability of this provision to space resources, even less so on its meaning.

Interestingly, the US executive order only proclaims that “Americans *should* [emphasis added] have the right to engage in commercial exploration, recovery, and use of resources in outer space, consistent with applicable law.” The (non-legal) reason given therefore is that outer space is a unique place of human activity, which the US does not consider a global commons. The document does not provide a foundation for this claim and it seems hard to reconcile it with Art I OST. This provision provides in para 1 that space exploration and use “shall be carried out for the benefit of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.” This is further complemented by para 2, which states that “outer space, including the Moon and other celestial bodies, shall be free for exploration and use by all States […] on a basis of equality”, and that “there shall be free access to all areas of celestial bodies.” These general and arguably somewhat open formulations still seem to call into question at least a unilateral undertaking, based on priority claims gained by technically more developed states and commercial entities.

Detailed resource exploitation regime was rejected by space-faring nations

The ambiguity of the OST with respect to the exploitation of celestial bodies contributed to the drafting of a subsequent treaty, the MA. Notwithstanding the substantial overlap with the OST, the most impactful new rules proposed, and simultaneously the biggest impediments to the treaty’s widespread adoption, were contained in its Art 11:

> “(1) [Celestial Bodies] and [their] natural resources are the common heritage of mankind[…]
>
> (3) Neither the surface nor the subsurface of [a celestial body], nor any part thereof or natural resources in place, shall become property of any State, international intergovernmental or non- governmental organization, national organization or non-governmental entity or of any natural person.
>
> (5) States Parties to this Agreement hereby undertake to establish an international regime, including appropriate procedures, to govern the exploitation of the natural resources of the moon as such exploitation is about to become feasible.”

Bearing similarity to the administration of the deep seabed by the centralized International Seabed Authority, it is these rules that the US executive order deems not “effective or necessary”, explicitly instructing its Secretary of State to resist any attempts to let the MA settle into a status of customary international law. It is notable that precisely the regime on the deep seabed in its Part XI of the 1982 UN Convention on the Law of the Sea (UNCLOS) was the reason for the US not to ratify this treaty. Consequently, and consistent with the above, it does not recognize the seabed exploitation regime imposed by the International Seabed Authority, while acknowledging most of the non-seabed-related rules as customary international law.

The necessity of such gesture is questionable: The MA has seen only minimal ratification, notably excluding most space-faring nations. Consequently, most discussions on the legality of space mining have been held on the basis of the OST (most notably its prohibition of appropriation of celestial bodies as explained above), a treaty which the United States is party to. To the end that contents of the MA would enter into the body of international custom, it would be those that correspond to the clauses of the OST, which the US is not only not objecting to, but promising compliance with Sec 403 of its SPACE-Act. There is little reason to believe that customary law has developed from other provisions of the MA, with states being cautious to confirm the existence of customary space law beyond the general principles of the OST (see e.g. here and here). Naturally, the US does not consider space mining to be prohibited by the OST, making its behaviour internally consistent. However, this does not change that space mining might very well be found illegal under the OST in which case rejection of the MA would be without purpose. We can understand the rejection of the content of the MA then less as a reaction to the (unrealistic) expectation that its contentious points will enter international custom and rather as an attempt to factualize a narrow interpretation of the valid and binding OST.

Iterative progress within the United Nations

After the failure of the MA to establish international consensus, harmonization of efforts of resource exploitation shifted from the hard law of treaties to softer instruments of resolutions, declarations and, plainly, discussions. The UN Committee on the Peaceful Uses of Outer Space (COPUOS) was established in 1959 and is the main forum of the United Nations for the development of outer space issues, including space law. Since 2017, the Legal Subcommittee of COPUOS retains an agenda item “General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources” (A/71/20,para 215). The Legal Subcommittee has since addressed this highly debated issue and is tentatively in the process of installing a working group on this issue. Last year’s development nevertheless shows the controversy around this issue. Although many key players in the space sector such as Russia, China, India and Japan are also said to have ambitions towards space mining, disagreement begins when it comes to what the outcome of the working group should be; a binding treaty, some non-binding guidelines or best practices? In its 2019 meeting, COPUOS failed to establish a working group within the Legal Subcommittee, and resorted to planning “scheduled informal consultations” (one may say “formal informals”) during the next meeting of

the Legal Subcommittee in 2020, which are hoped to bring clarity and agreement on the mandate and other parameters of a potential working group (A/74/20, para 258). In other words, a solution does not appear to be imminent.

Commercial entities to take up the mantle on cooperation in outer space?

We can understand the US executive order as the latest in a chain of moves meant to charge ahead of international consensus with respect of resource extraction in outer space. Again, the deployed strategy is a fact-creating one: By distinguishing the MA and its scope encompassing resource exploitation from the widely accepted OST, a narrower scope of the latter not encompassing the contentious matter is implied.

The success of the US strategy will mainly depend on how the international community will react to this series of actions. In a first statement, the Russian government refrained from criticizing the Executive order without legal analysis, but stated unequivocally, that any attempt at privatizing outer space would be unacceptable. Subsequently, the Russian government announced that it had agreed to establish a working group on space issues with the US and had made first proposals.

Moving forward, the executive order tasks the US Secretary of State with seeking bi- and multilateral arrangements with states, but apparently, this is strictly not meant to include a legally binding treaty. In fact, one commentator claims that one of the very purposes of the order is "to drive a nail in the coffin of the Moon Agreement".

It is unclear, what any international solution for this issue could look like. With unilateral steps taken by single space-faring nations, legally binding consensus is quickly becoming less likely. International cooperation might very well shift to commercial actors, mirroring a trend of private entities entering the market for space activities. How a universally acceptable solution, compliant with the core principles of the OST, in particular that outer space shall be used to the benefit of all countries irrespective of their space-faring capabilities, can be achieved without a binding international agreement remains mystifying.

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Cite as: Michael Friedl & Maximilian Gartner, “Legitimation through executive order? The issue of space resources in international law”, *Völkerrechtsblog*, 21 April 2020.
